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Intimate partner violence among women of reproductive age during the COVID-19 pandemic in Ethiopia: a systematic review and meta-analysis

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ABSTRACT

Objectives Intimate partner violence (IPV) is the violence committed by both current and former spouses and partners, and the rate of this violence is known to increase during different pandemics. The pooled prevalence of IPV among pregnant women before the COVID-19 pandemic was 37%, however, the pooled prevalence of IPV among women during COVID-19 is not yet known. Therefore, this study aimed to assess the pooled prevalence of IPV and its determinants among women of reproductive age during the COVID-19 pandemic in Ethiopia.

Design Systematic review and meta-analysis.

Data sources The review was done as per the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guideline using different search databases such as: PubMed/Medline, Cochrane Library, Virtual Health Library Regional Portal, HINARI (research4life), and Google Scholar.

Eligibility criteria Those quantitative studies conducted in Ethiopia during the COVID-19 pandemic, that reported the prevalence of IPV among women of reproductive age, and were published in English from 13 March 2020 to 15 October 2025, were included for this study.

Data extraction and synthesis All authors independently extracted data using the Joanna Briggs Institute manual for evidence synthesis. Any incongruity of the result in the data extraction process was resolved through discussions and consensus (ie, a Delphi process). The data were analysed using Stata Corp V.11 software. The heterogeneity between studies was assessed using I^2 test statistics and the random-effects meta-analysis was done using the restricted maximum likelihood method. Publication bias was assessed using funnel plots, and Egger's and Begg's tests.

Result In this study, a total of 802 articles were identified using different electronic databases. Finally, 12 studies that fulfilled the eligibility criteria were included for systematic review and meta-analysis. A total of 7397 study participants were sampled from April 2020 to August 2021. The overall estimated pooled prevalence of IPV was 33.5% (95% CI 22.9% to 44.1%) and the prevalence of physical, psychological and sexual violence was 16.4%, 28.2% and 17.4%, respectively. Different factors such as: age of the young women (adjusted odds ratio (AOR)=3.24; 95% CI 0.6, 5.8, p=0.015), lack of formal education (AOR=2.63; 95% CI 1.7, 3.6, p=0.000), partner's substance use (AOR=2.07; 95% CI 1.5, 2.7, p=0.000), partner not attending formal education (AOR=3.38; 95% CI 2.2, 4.6, p=0.000) and partner's alcohol use (AOR=2.82; 95% CI 1.1, 4.6, p=0.000) were found to be significantly associated with IPV among women during the COVID-19 pandemic.

Conclusions In this study, a third of women of reproductive age experienced IPV during the COVID-19 pandemic. Women whose partners used alcohol and other substances were found to be vulnerable to IPV. Therefore, this finding gives an insight for policymakers to focus on empowering women and their partner's economic and educational status, promoting health education for partners towards the negative impact of bad behaviours like alcohol and other substance utilisation on their health, and the physical, mental and social wellbeing of women. Moreover, the burden of IPV is increased not only during such a pandemic but also during different

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ Intimate partner violence (IPV) is one of the most common forms of gender-based violence (GBV) against women which affects the physical, mental, and social wellbeing of women.
⇒ The incidence of GBV is increasngly associated with different chronic illnesses like HIV/AIDS, and different global disasters like war, earthquakes, and COVID-19 pandemics.

WHAT THIS STUDY ADDS

⇒ To date, no study has focused on assessing the pooled prevalence of IPV among women of reproductive age group during the COVID-19 pandemic in Ethiopia. Accordingly, the current study found that about one-third of women of reproductive age experienced IPV during the COVID-19 pandemic.
⇒ Psychological violence was the most common form of IPV compared with physical and sexual violence.
⇒ Women whose partners used alcohol and other substances were found to be vulnerable to IPV.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ The current study highlights the clear burden of IPV among women in Ethiopia during the COVID-19 pandemic, thus, it can serve as a benchmark for future monitoring, and development of appropriate strategies, policies, and programmes towards the elimination of all forms of violence among women during any timeframe.

⇒ The current study also found that sexual violence was found to be low compared with other forms of violence, and this could be due to the reason that there is a rare chance of revealing such violence, and the culture and sensitivity of the issue particularly in low-income and middle-income countries like Ethiopia.

⇒ Therefore, this study suggested a continuous provision of gender-related health services for both sexes and also there should be continuous collection of data and monitoring of IPV levels to assess the impact of prevention and response efforts.

⇒ Moreover, economic crisis and stress among partners during such a pandemic are known to happen and enforce those partners to practice IPV. Therefore, the necessary health education related to stress-relieving mechanisms and men's economic empowerment techniques should also be addressed to restore their identities before engaging in harmful behaviours or attitudes.

internal displacements, conflicts and unrest. Therefore, we recommend policymakers to frequently assess IPV-related burdens during such events and act accordingly.

INTRODUCTION

Gender-based violence (GBV) is violence directed against a particular gender disproportionately, however, the rate is unduly high among women.[1] Violence against women is one of the main forms of GBV, and the main public health problem that affects the physical, economic, sexual, mental and social well-being of women, and/or the act of violence results in suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life.[2] Worldwide, nearly a third, 27% (23%–31%) of women aged 15–49 years experienced physical and/or sexual intimate partner violence (IPV) in their lifetime.[3 4]

Despite the Universal Declaration of Human Rights' recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family regardless of sex, age, language, race, colour, religion, or any other factors, worldwide, GBV remains disproportionality high particularly in low-income and middle-income countries.[5]

The estimated prevalence of lifetime IPV ranges from 20% in the Western Pacific to 33% in the WHO South-East Asian region. Globally, more than 38% of all murders of women are committed by intimate partners.[3] The IPV is known to be prevalent in Africa.[6] Despite different strategies (teaching safe and healthy relationship skills, creating protective environments, strengthening economic support for families and others) implemented to prevent IPV in Africa,[7–9] IPV remains the challenge, where the lifetime experience of at least one form of violence ranges from 27% to 44%. Moreover, about 14%–32% of women and girls experienced physical, sexual or both forms of violence in a 1-year period in 2018.[7]

IPV has numerous negative impacts on women's health. For instance, it causes physical health consequences such as head injuries, bruises, lower back pain and broken ribs.[10 11] Moreover, prolonged exposure to IPV also contributed to long-term chronic health problems, like chronic pain, HIV,[12] tuberculosis, heart disease, diabetes,[13 14] cancer,[15 16] asthma and gastrointestinal disorders.[4 10] IPV also causes mental health effects in women including depression, post-traumatic stress disorder, anxiety disorders, memory loss, sleep disturbances and suicide attempts.[4 17] IPV also causes different sexual and obstetrical health-related problems such as sexually transmitted infections, unwanted pregnancies, and obstetric complications like high rates of low birth weight and preterm birth.[17–19] Furthermore, IPV could affect childhood development due to the women's reduced health-seeking behaviour for their children.[20 21]

Globally, different catastrophic events like earthquakes, hurricanes and the COVID-19 pandemic contribute to an increase in interpersonal violence, reduced social services, high unemployment rates, long quarantines and severe social disconnection.[22 23] The burden of IPV particularly increased among women during the COVID-19 pandemic due to restrictive measures (eg, reduced social contact and stay-at-home with a perpetrator).[24] For instance, across the USA, the rate of domestic violence increased from 21% in 2019 to 35% in 2020.[25]

In Ethiopia, although different measures like travel restrictions, the closing of different educational institutions and workplaces, and the use of different personal protective equipment were taken to control the COVID-19 pandemic, the distribution of the COVID-19 pandemic and its negative consequences remained high in 2020.[26] For instance, it caused interrupted education and school dropouts,[27] age-based violence and GBV, poor support of persons with disabilities, increased unemployment and focus on more informal and less reliable jobs, and worsened mental health and psychosocial well-being.[28]

The combined effect of interrupted education, stresses related to household income and increased household work also increased the risk of early marriage, particularly in rural parts of Ethiopia.[29] Moreover, food insecurity associated with unemployment was also increased.[30] In addition, the COVID-19 pandemic also affects different macroeconomic variables like productivity, domestic trade, import exports, tourism, international aviation, remittances, foreign direct investment and the Ethiopian economy.[31] Political unrest and instability, desert locusts, and the tensions between Ethiopia and Egypt on the Great Ethiopian Renaissance Dam caused inflation, economic depression, displacement and income inequality during the COVID-19 pandemic. These situations also exacerbate the neglect of controlling against the COVID-19 pandemic. These

combined and complex situations are also expected to increase IPV in Ethiopia.[32]

During the COVID-19 pandemic particularly in Ethiopia, there was an increase in food prices and a reduction in dietary diversity. Moreover, maternal and child health services were also interrupted due to fear of transmission of COVID-19 and poor supply of personal protective equipment.[33] In Ethiopia, intervening in IPV among women and its consequences have remained a challenge. However, IPV was prevalent among women before the COVID-19 pandemic as indicated by different studies; 12.04% in Yirgalem,[34] 19.69% in Hosana[35] and 25.36% in Gondar.[36] IPV was also more commonly prevalent during the COVID-19 pandemic with 62.4% in southern Ethiopia,[37] 22.4% in Dessie,[38] 39.3% in south-west Ethiopia[39] and 42.3% in Debre Birhan.[40]

In Ethiopia, however, more than 10 studies were conducted during the COVID-19 pandemic. Results of different prevalences ranged from 9.5% to 65.7%,[37–48] and there is no systematically pooled calculation of prevalence of IPV among women so far. An organised report of pooled prevalence of IPV among women of reproductive age during such a pandemic is necessary for policymakers and other stakeholders to design strategies aimed at preventing any form of violence and to achieve the United Nation 2030 Sustainable Development Goal towards gender equality.[49] Therefore, this study aimed to determine the pooled prevalence of IPV among women of reproductive age during the COVID-19 pandemic, in Ethiopia.

METHOD

Study setting

Ethiopia is a landlocked country located in East Africa. It is bordered by Eritrea to the north, Djibouti to the north-east, Somalia to the east and south-east, Kenya to the south, South Sudan to the west, and Sudan to the north-west. Ethiopia covers an area of 1112 000 km^2. As of 2023, Ethiopia is the second most populous country in Africa after Nigeria with around 116.5 million inhabitants. Addis Ababa is the national capital and largest city.[48]

GBV is a common practice in Sub-Saharan Africa (SSA) with a pooled prevalence of IPV of 35.5%,[50] and particularly in Ethiopia, the prevalence of IPV ranged from 7% to 81%.[51] The novel coronavirus was first recognised in Wuhan city, Hubei Province, China, and reported to the WHO on 31 December 2019, and then it was confirmed by the WHO on 12 January 2020. On 13 March 2020, Ethiopia recorded its first COVID-19 case. The virus was first declared in Addis Ababa before spreading to other locations. On 8 April 2020, the government of Ethiopia declared a nationwide 'public health state of emergency'.[52]

Review development

This study has been based on the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020[53] checklist (online supplemental file 1). Prior to starting this systematic review, the presence of antecedent protocol and meta-analysis on the topic of interest was checked from major databases such as the Cochrane Database of Systematic Reviews, Joanna Briggs Institute (JBI) Database of Systematic Reviews and Implementation Reports, Health Services Research Projects in Progress, Prospero International Prospective Register of Systematic Reviews database registries, and the Campbell collaboration library and evidence for policy and practice information. Finally, the authors made sure that no protocols and meta-analyses of IPV among women during the COVID-19 pandemic were done.

Electronic databases and search strategy

Stage 1

Published articles related to IPV among reproductive-age women during the COVID-19 pandemic were identified by searching major bibliographic databases such as PubMed/Medline, Cochrane Library, Virtual Health Library Regional Portal, Health Inter-Network Access to Research Initiative (HINARI) or (research4life), and Google Scholar; and keywords including; prevalence, epidemiology, magnitude, estimates, incidence, associated factors, determinant factors, factors, IPV, GBV, domestic violence, spouse abuse, physical abuse, physical violence, emotional violence, psychological violence, family violence, reproductive coercion, sexual assault, rape, women of reproductive age, women, COVID-19 pandemic, and Ethiopia. Boolean operators ('AND' and/'OR') and Medical Subject Headings terms were established for each database. Moreover, grey literatures were checked using national and international institutional repositories (Addis Ababa University, Jimma University, Mekelle University, and eScholarship Repository), and Google Scholar (online supplemental file 2).

Stage 2

For additional studies and reports, the reference lists of all included studies were searched. All articles published since the beginning of the COVID-19 pandemic (13 March 2020) till 15 October 2024 were searched.

Outcome measure

The outcome of interest is IPV which is defined as any violence whether physical, psychological, sexual or any combination of them, and it can only occur between romantic/intimate partners who may or may not be living together in the same household.[10 54 55] Psychological violence was defined as any form of threat of acts including insult, intimidation on purpose, shouting, controlling, humiliation and threats to hurt the victim.[10 56] Sexual violence is defined as any sexual act performed on an individual without their consent, whether or not it is completed.[10 56] Physical violence is defined as any act which causes physical harm as a result of unlawful physical force such as pushing, slapping, punching, throwing, hair pulling hitting, kicking or burning.[10 56]

Domestic violence can occur between a parent and child, siblings or even roommates. IPV can only occur between romantic partners who may or may not be living together in the same household. IPV may also be referred to as intimate partner domestic violence.

Criteria for considering studies for the review

Inclusion criteria

In this systematic review and meta-analysis, studies with the following criteria were included:

1. Studies done during the COVID-19 pandemic
2. Studies that included women 15–49 years of age
3. The published and unpublished primary studies that reported the prevalence of IPV (focused on either or a combination of physical, sexual and emotional violence)
4. Studies published in English from 13 March 2020 to 15 October 2024
5. Studies conducted in Ethiopia
6. Only quantitative studies
7. Observational studies that reported prevalence (ie, cross-sectional and cohort studies).

Exclusion criteria

In this systematic review and meta-analysis, studies with the following criteria were excluded:

1. Case reports, short communications, case series, opinion pieces and letters to the editor
2. Only the most recent version was included when the information was reported in more than one study
3. Studies that reported only the factors associated with IPV and consequences of IPV
4. Studies scoring <60% of the JBI methodological checklists for prevalence were not included in the meta-analysis.

Selection of studies for inclusion in the review

All identified articles using electronic databases were exported to EndNote V.X7 (Thomson Reuters, New York, USA) to remove the duplicated articles. Then, four authors (ASB, GY, AK and LFA) independently screened articles based on the title and abstract. Then, using the inclusion and exclusion criteria, four authors (AAE, BDT, MA and ESL) independently assessed the full texts of the included articles. Any discrepancies between the screening results of all authors were resolved through discussions. All the procedures for the selection of studies were done using the PRISMA flow diagram.[53]

Data extraction and critical appraisal of studies

All authors independently extracted data using the JBI manual for evidence synthesis.[57] Any incongruity of the result in the data extraction process was resolved through discussions and consensus (ie, a Delphi process), where the primary author of the selected article was contacted when an extra clarification was needed. The data was extracted using the following components:

Study characteristics

- **Publication details:** first author's name, publication year and publication status
- **Study design and sampling method:** study type (cross-sectional, cohort), sampling methods (random or non-random)
- **Characteristics of the study population:** region of the study, study setting, median/mean age and number of study participants

For the first outcome variable (prevalence)

- **Result of the study:** the overall prevalence of IPV, sexual violence, psychological violence and physical violence

For the secondary outcome (associated factors)

- **Associated factors:** Significantly associated with the outcome variable (IPV).

We used the JBI critical appraisal checklists (2020)[58] for prevalence studies (online supplemental file 3). The included studies were critically appraised by all authors, and any disparity among authors was resolved through discussion.

Data synthesis and assessment of heterogeneity for meta-analysis

The extracted data were exported from Microsoft Excel V.2010 to Stata software (Stata Corp V.11, Texas, USA) for meta-analysis. The skewness and kurtosis tests for normality were done and the assumption was met,[59] where the result indicated 0.3068 and 0.8633, respectively. Therefore, stabilising for sample variance using the Freeman-Tukey double arc-sine transformation wasn't required.[60] The heterogeneity between studies was assessed by computing the value of p and the I^2 test statistics. I^2 values of 25%, 50% and 75% were interpreted as low, medium and high heterogeneity, respectively.[61] In this study, since there was heterogeneity between the original studies (I^2=99.2%, p<0.0001), the pooled prevalence of IPV was estimated using the random-effects meta-analysis models. Since restricted maximum likelihood (REML) and the Bayesian methods are recommended over the DerSimonian and Laird method,[62] a random-effects meta-analysis with an estimation of REML was performed in this study for between-study variance.

The sources of heterogeneity were investigated by subgroup analysis using the following grouping variables: location in the country, study design and study setting. Besides, the methodological heterogeneity was also checked by the meta-regression analyses using study-level covariates like sample size and methodological quality score; however, none were found to be statistically significant for sensitivity analysis. The presence of publication bias was assessed using funnel plots, and Egger's and Begg's tests. Results were presented using tables and a summary of descriptive statistics.

Patient and public involvement

Patients and/or the public were not involved in the design or conduct or reporting plans of this research. The dissemination of the paper would involve several

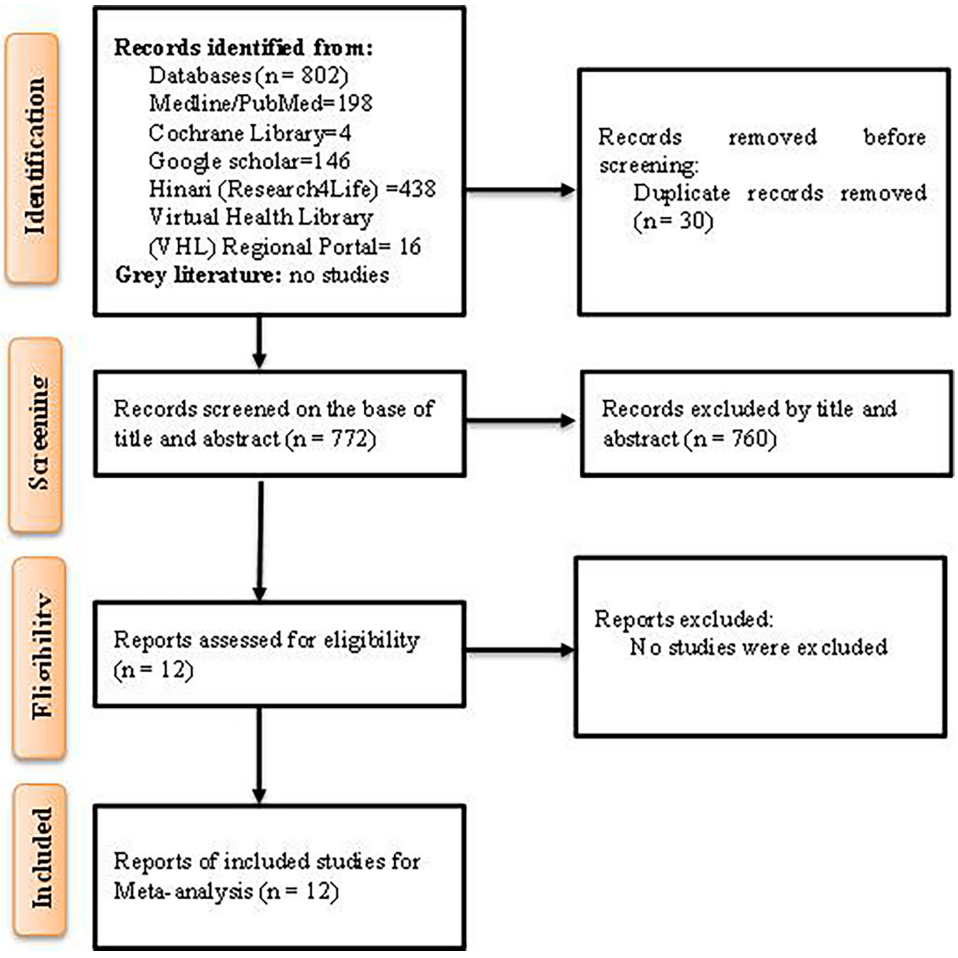

Figure 1 PRISMA flow diagram of the included studies for systematic review and meta-analysis of IPV among women of reproductive age during the COVID-19 pandemic, in Ethiopia. IPV, intimate partner violence; PRISMA, Preferred Reporting Items for Systematic Reviews and Meta-Analyses.

women's associations and public institutions such as the Ministry of Women and Social Affairs, Network of Ethiopian Women's Associations, and Organization for Women in Self Employment.

RESULT

Selection of eligible studies

Initially, a total of 802 articles were identified using different electronic databases, and then 30 duplicate articles were removed. Of the remaining 772, 760 studies were excluded as their title and abstract reading were not related to the outcome (IPV). Finally, 12 studies that fulfilled the eligibility criteria were included for systematic review and meta-analysis. A total of 7397 study participants were sampled from April 2020 to August 2021. The overall selection, screening and inclusion process is presented using a PRISMA flow diagram (figure 1).

Characteristics of the included studies

The detailed descriptions of the included studies are given in table 1. Of the majority of the included studies, 10 studies were cross-sectional; of these, 2 studies were school based,[43 48] 2 studies were health facility based[37 42] and 6 studies were community based,[38–41 44 47] while the remaining 2 were cohort studies.[45 46] The total number of participants in each study ranged from 343[48] to 983.[46] Moreover, one study was conducted at the national level,[46] four studies in central Ethiopia,[40–42 48] four studies in northern Ethiopia[38 43–45] and three studies in southern Ethiopia.[37 39 47] For the detailed characteristics of the included studies see online supplemental file 4.

The methodological quality of prevalence studies

Using the JBI checklist for prevalence studies, six studies scored above the median value of 83.5%,[37 39–41 43 45] and six scored 71%–83.4%.[38 42 44 46–48] For the methodological quality results of all included studies assessed using the JBI critical appraisal tool for prevalence studies see online supplemental file 5. Accordingly, all studies were included in the meta-analysis.

Meta-analysis of prevalence of IPV

The prevalence of IPV ranged from 9.5%[42] in Addis Ababa to 65.8% in Amhara,[45] while the overall estimated pooled prevalence in the pooled sample of 7397 reproductive-age women was 33.5% (95% CI 22.9% to 44.1%) (figure 2). Of this, the prevalence of physical, psychological and sexual violence was 16.4% (95% CI 12.2%

Table 1 Characteristics of included studies for meta-analysis of IPV among women of reproductive age during the COVID-19 pandemic, in Ethiopia

First author and publication year	Study design	Study setting	Study area (region)	Total participants	Prevalence of IPV
Belay AS *et al*[37]	Cross-sectional study design	Health facility based	Southern Ethiopia	657	62.4
Tadesse AW *et al*[38]	Cross-sectional study design	Community based	Northern Ethiopia	589	22.4
Engeda AS *et al*[41]	Cross-sectional study design	Community based	Central Ethiopia	700	19.0
Kassie A *et al*[43]	Cross-sectional study design	School based	Northern Ethiopia	371	42.1
Gebrewahd GT *et al*[44]	Cross-sectional study design	Community based	Northern Ethiopia	682	24.6
Fetene G *et al*[39]	Cross-sectional study design	Community based	Southern Ethiopia	590	39.3
Demeke MG *et al*[40]	Cross-sectional study design	Community based	Central Ethiopia	796	42.3
Asratie MH *et al*[45]	Cohort study design	Health facility based	Northern Ethiopia	774	65.8
Wood SN *et al*[46]	Cohort study design	Health facility based	National level	983	15.1
Shitu S *et al*[47]	Cross-sectional study design	Community based	Southern Ethiopia	448	24.1
Teshome A *et al*[42]	Cross-sectional study design	Health facility based	Central Ethiopia	464	9.5
Mingude AB *et al*[48]	Cross-sectional study design	School based	Central Ethiopia	343	36.2

IPV, intimate partner violence.

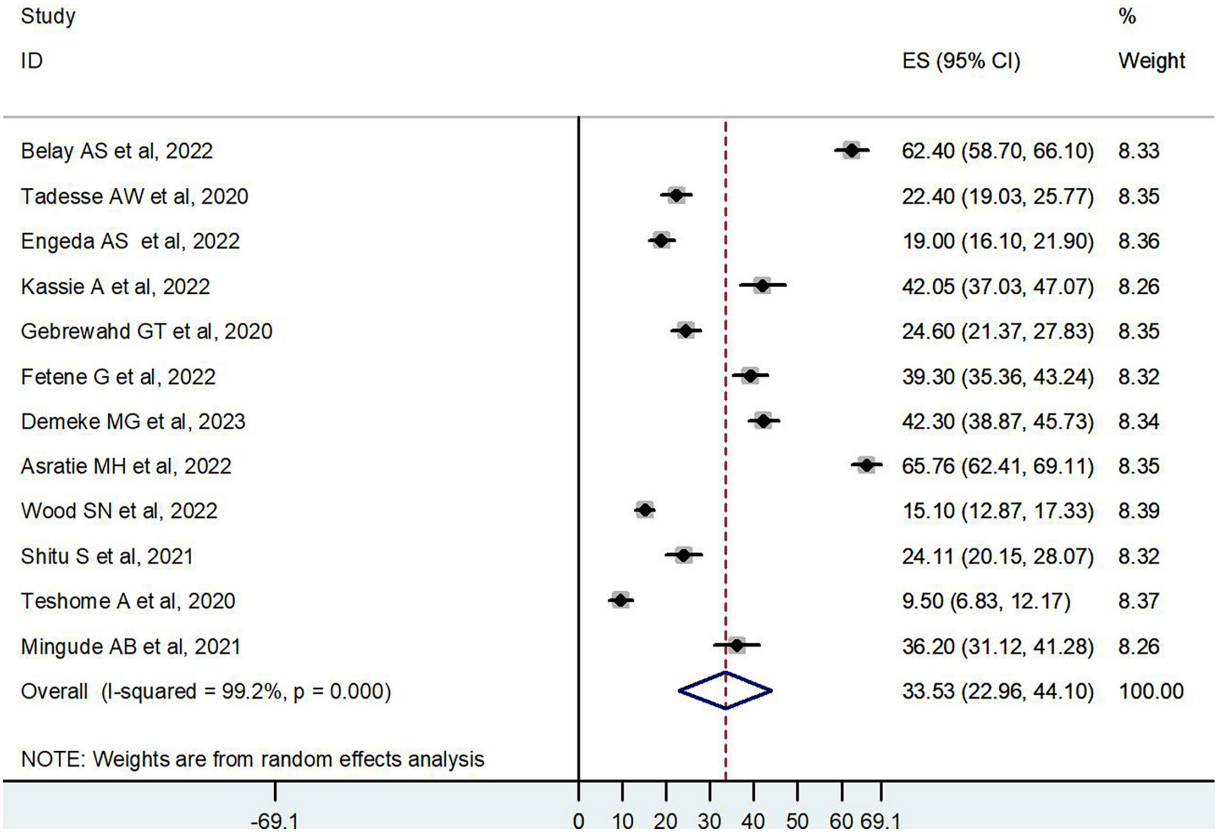

Figure 2 Meta-analysis and forest plot presentation of IPV among women of reproductive age during the COVID-19 pandemic, in Ethiopia. IPV, intimate partner violence.

Table 2 Meta-regression analysis of study-level covariates to explain the sources of heterogeneity for the overall prevalence of IPV and its classification among women of reproductive age during the COVID-19 pandemic, in Ethiopia

Variables		Coef.	95% CI		P value
Overall IPV	Sample size	0.0047206	−0.0537201	0.0631614	0.874
	Quality score	1.449332	0.5389156	2.359747	0.002
Physical	Sample size	−0.017256	−0.0429074	0.0083953	0.187
	Quality score	.1160098	−0.4769367	0.7089563	0.701
Psychological	Sample size	−0.0246031	−0.072951	0.0237447	0.319
	Quality score	−0.3900129	−1.907428	1.127403	0.614
Sexual	Sample size	−0.0246031	−0.072951	0.0237447	0.319
	Quality score	−0.529595	−1.370578	0.3113879	0.217

Coef., coefficient; IPV, intimate partner violence.

to 20.6%), 28.2% (95% CI 17.1% to 39.4%) and 17.4% (95% CI 11.7% to 23.1%), respectively (online supplemental file 6).

Test of heterogeneity, sensitivity and subgroup analysis

The included studies exhibited significant heterogeneity for the overall estimated pooled prevalence of IPV (I^2=99.2%, and p≤0.0001) (figure 2), and for its subclassification; physical violence (I^2=96.3% and p≤0.0001), psychological violence (I^2=99.3% and p≤0.0001) and sexual violence (I^2=97.9% and p≤0.0001) (online supplemental file 6). The possible sources of heterogeneity were investigated using subgroup analysis, considering different factors such as location in the country, study design and study setting (online supplemental file 7). Thus, all of these variables were found to be the source of heterogeneity for both crude and sensitivity analyses (p<0.001) (online supplemental file 8).

Moreover, the meta-regression analysis results showed that the study quality score was found to be the source of heterogeneity for the crude analysis (p=0.002), whereas, sample size and study quality score were not the sources of heterogeneity for the sensitivity analysis (p>0.1) (table 2).

Test of publication bias for prevalence studies and its determinants

Publication bias refers to a systematic deviation from the truth in the results of a meta-analysis due to the higher likelihood for published studies to be missing. Thus, in this study, publication bias for prevalence studies was assessed using funnel plot and Egger's tests, and there was no evidence of publication bias as indicated by Egger's test (p=0.06) for the overall IPV. Although the funnel plot looks asymmetrical for the overall IPV, this may not necessarily reflect publication bias. This situation might be seen when a small number of studies were included for meta-analysis. In such cases, the Egger's test result will be more indicative of the publication bias.[63] In contrast to this, there was evidence of publication bias for different forms of IPV (sensitivity analysis): Egger's test result for sexual violence (p=0.000), Egger's test result for psychological violence (p=0.015) and Egger's test result for physical violence (p=0.001) (online supplemental file 9).

Therefore, the trim-and-fill analysis was done to correct publication bias for various forms of IPV in order to prevent any misleading conclusions, underestimation of the benefits, diminished credibility, limited understanding of the topic, and irreproducible research associated with the publication bias. This approach makes the assumption that missing studies, which represent research that hasn't been published due to publication bias, will probably appear symmetrically on the plot. Accordingly, the filled funnel plot with pseudo 95% confidence limit indicated symmetrical distribution. Specifically, 4 studies were included and 15 studies were computed for assessing publication bias for physical violence. Then, the filled funnel plot with a pseudo 95% confidence limit indicated a symmetrical distribution and the pooled estimate of the effect size of physical violence was 10.87 (6.1, 15.7). Similarly, for psychological violence, 5 studies were included and a total of 15 studies were computed. Then, the filled funnel plot with a pseudo 95% confidence limit indicated symmetrical distribution, and the pooled effect size was found to be 13.46 (1.3, 25.7). Moreover, 4 studies were included and a total of 14 studies were computed for assessing publication bias for sexual violence. Then, the filled funnel plot with a pseudo 95% confidence limit indicated symmetrical distribution and the pooled estimate of sexual violence was 9.26 (2.9, 15.6) (online supplemental file 10).

Publication bias for determinants of IPV was assessed using a funnel plot and Egger's tests. There was no evidence of publication bias for determinants such as: age of young women, lack of formal education, partner's substance use and partner's alcohol use, as the funnel plot indicated a symmetrical inverted funnel and Egger's test (p>0.05) for these factors. Whereas, the funnel plot looks symmetrical for lack of formal education for a partner (Egger's test (p=0.039)) which indicated that there is publication bias for this factor, and therefore, the trim and fill analysis was done. Then, after one study

Table 3 The pooled OR of the factors associated with IPV among women of reproductive age during the COVID-19 pandemic, in Ethiopia

Factors associated with IPV among women during the COVID-19 pandemic in Ethiopia				
Factors	**Number of studies**	**Pooled OR (95% CI)**	**I^2, %**	**P value**
Young women's age	3	3.24 (0.6, 5.8)	22.00%	0.015
Lack of formal education	4	2.63 (1.6, 3.5)	0.00%	0.000
Partner's substance use	4	2.07 (1.4, 2.7)	0.00%	0.000
Partner's alcohol use	3	2.82 (1.1, 4.5)	84.80%	0.002
Partner not attending formal education	4	3.38 (2.1, 4.5)	0.00%	0.000
Women's loss of income due to COVID-19	2	9.69 (4.9, 14.5)	0.00%	0.000

IPV, intimate partner violence.

was added, a total of five studies were computed and the filled funnel plot with a pseudo 95% confidence limit indicated symmetrical distribution and the pooled estimate of OR for lack of formal education for a partner was 3.10 (1.9, 4.2) (online supplemental file 10).

Determinants of IPV

In this meta-analysis, from the total of 12 studies, only 9 studies with five distinct factors were included in the meta-analysis. The remaining three studies identified the factors which were reported only by a single study. Based on the review, factors which were reported in three or more studies were broadly categorised as follows: (1) Victim-related characteristics such as young women's age and lack of formal education, and (2) Perpetrator-related factors: partners' substance use (the use of chat, tobacco, shisha, ganja, morphine and cocaine), lack of formal education, and partner alcohol use. Although meta-analysis of determinants reported by at least two original studies is possible,[64] this may not be sufficient for arriving at definitive conclusions. Therefore, factors that were reported by at least three studies were included to get the real combined effect of ORs and discussed[65] (table 3). Although the factor like women's loss of income due to COVID-19 is reported by only two studies, it has a strong association with the outcome variable and therefore, we have discussed its result.

Victim-related characteristics

In this study, the pooled effect of three studies showed that young women's age was significantly associated with IPV (AOR=3.24; 95% CI 0.6, 5.8, I^2=22.0% and p=0.015). Similarly, the pooled effect of four studies showed that women who didn't attend formal education were almost three times more likely to experience IPV (AOR=2.63; 95% CI 1.7, 3.6, I^2=0.0% and p=0.000). Moreover, the pooled effect of two studies showed that women's income loss due to COVID-19 was also significantly associated with IPV (AOR=9.69; 95% CI 4.9, 14.5, and p=0.000) (table 3).

Perpetrator-related characteristics

In this study, the pooled effect of three studies showed that participants whose partners used alcohol were almost three times more likely to experience IPV compared with those who did not use alcohol (AOR=2.82; 95% CI 1.1, 4.6, I^2=84.8% and p=0.000). Similarly, the pooled effect of four studies showed that participants whose partners used substances were two times more likely to experience IPV compared with their counterparts (AOR=2.07; 95% CI 1.5, 2.7, I^2=0.0% and p=0.000). Moreover, the pooled effect of four studies showed that women whose partners didn't attend formal education were three times more likely to experience IPV (AOR=3.38; 95% CI 2.2, 4.6, I^2=0.0% and p=0.000) (table 3).

DISCUSSION

IPV has numerous health and economic consequences for women, children and the country at large. The rates of the incidence of IPV among women were increased in low-income and middle-income countries, particularly during the COVID-19 pandemic.[66] This systematic review and meta-analysis was conducted to determine the overall prevalence of IPV and to identify its determinants among women during the COVID-19 pandemic in Ethiopia.

We found that the overall prevalence of IPV among women during COVID-19 in Ethiopia was 33.53%. This finding is consistent with different studies conducted in Ethiopia before the COVID-19 pandemic, which showed that the pooled prevalence of IPV among pregnant women was 26.1%.[67] Similarly, this is in line with the global prevalences of IPV before the COVID-19 pandemic which were 39%[68] and 37.3%[69] among people living with HIV and women aged 16 years and over, respectively. Therefore, these similarities could be attributed to the similarity of the geographical areas and the culture of the study subjects in Ethiopia. Moreover, this similarity could also be due to the fact that both the COVID-19 pandemic and chronic diseases like HIV/AIDS could contribute to the increment of IPV among women, which could increase mental instability and disharmony.[70]

The pooled prevalence of this study was higher than the studies conducted prepandemic in North Africa (15%),[71] Asia (13%),[72] Singapore (11%)[7] and Poland (13%).[7] This discrepancy might be due to the difference in the study period and socioeconomic status. For instance, during the COVID-19 pandemic, there was a lockdown policy which is expected to increase the risk of IPV. On the contrary, this finding was lower than that in the studies conducted before the pandemic in Wolaita, Ethiopia (59.7%),[73] Arba Minch Ethiopia 50%,[74] Kenya 66.7%[75] and Uganda 56%.[76] This discrepancy might be due to the difference in the study method, study subject and socioeconomic status. For instance, the current study finding is a result of a systematic review and meta-analysis whereas the other study findings are the results of a single study. Moreover, the study subjects for the studies conducted in Kenya, Wolaita and Arba Minch were refugee women, women with HIV and women from households with food insecurity, respectively. Therefore, it is known that refugee women, HIV-infected women and women from households with food insecurity could also contribute to the increment of IPV. Moreover, refugees are the population most vulnerable to different health problems, especially to GBV.[77]

The current study finding was lower than the meta-analysis study conducted among pregnant women in Iran revealed that the pooled prevalence of IPV was 48%.[78] In contrast to this finding, the pooled prevalence of IPV in the current study is much higher compared with the meta-analysis conducted in China and in African countries, which indicated that the prevalence of IPV among pregnant women was 7.7%[79] and 15.23%,[80] respectively. These discrepancies could be due to the differences in community awareness regarding the negative impact of IPV, individual educational status, accessibility of gender-based and reproductive health-related information, study setting and cultures of study subjects, tools used by individual studies, current pregnancy status of women, stressful life events, and study period. For instance, the current study revealed the pooled prevalence of IPV among all reproductive-age women during the COVID-19 pandemic. However, the other studies conducted in China and other African countries only included studies conducted among pregnant women before the COVID-19 pandemic.

The subgroup analysis of the current study revealed that the prevalence of IPV in central Ethiopia (26.68%) was lower compared with the prevalence of IPV in southern Ethiopia (41.95%) and northern Ethiopia (38.69%). This discrepancy might be due to the fact that study subjects including the perpetrators from around the capital Addis Ababa, Central Ethiopia might had a chance to advanced education, media exposure, and different legal and social services compared with those individuals who lived far from the centre or capital city, Addis Ababa. Moreover, the COVID-19 pandemic may also affect the economic activities of rural women because the women may have relied on remittances, distant marketplaces and being in a female-headed household.[81] Therefore, this could also increase the prevalence of IPV in rural parts of Ethiopia compared with the capital, Addis Ababa.

Regarding the different forms of IPV, in this study, the pooled prevalence of physical violence was 16.4%, psychological violence was 28.24% and sexual violence was 17.41%. In this study, the prevalence of sexual violence was low compared with other forms of violence and it could be due to the fact that women with physical IPV may seek medical treatment, legal services and social services, making it more detectable, and easily categorised as physical IPV. Associated with the physical violence, there is also the chance of the women to experience psychological IPV (eg, fear, anxiety, stress and others). In addition to this, although, women have also experienced sexual violence, the chance of revealing such violence is very rare, particularly in low-income and middle-income countries like Ethiopia due to the culture and sensitivity of the issue,[82 83] survivors' perception towards disclosure in healthcare settings,[84] and women's fear of acts of revenge by their partners as they have nowhere else to go, and poor legal systems to protect them particularly in low-income and middle-income countries.[85]

In this study, the pooled prevalence of sexual violence, psychological violence and physical violence (respectively, 12%, 21% and 16%) is also consistent with the findings of a meta-analysis study conducted in Ethiopia before COVID-19.[86] This correspondence might be attributed to a similar setting and culture. Although this study was conducted during COVID-19, the pooled results of different forms of violence also remain consistent with the findings of the pre-COVID study. This could be due to the reason that the previous study was conducted among pregnant women and being pregnant could also increase the risk of IPV just like during the COVID-19 pandemic. Moreover, the low prevalence of sexual violence compared with other forms of violence might also be due to poor reporting or seeking care from health institutions which could happen due to cultural beliefs,[87] shame and stigma,[88] lack of awareness of available services,[89] perceived impunity for perpetrators,[90] and threat of losing children.[88]

The prevalence of physical violence and psychological violence in the current study is found to be congruent with the meta-analysis study conducted globally, where the prevalence of physical violence and psychological violence was 18.3% and 32.8%, respectively.[69] Moreover, the current study was also found to be in line with another systematic review and meta-analysis study conducted among 23 countries where the prevalence of psychological violence was 28.4%, and physical abuse was 13.8%.[91] In contrast to these, the prevalence of sexual violence in the current study is higher compared with the meta-analysis study conducted globally, where sexual violence was 9.6%.[69] Similarly, it is found to be higher compared with the other meta-analysis study conducted in 23 countries, where the prevalence of sexual violence was 8%.[91] This discrepancy in the pooled prevalence of

sexual violence might be associated with the difference in culture, media exposure and period when the violence took place. For instance, the pooled prevalence of IPV in the current meta-analysis was done using the studies conducted during the COVID-19 pandemic, therefore, this could contribute to the increment of sexual violence compared with the results of the other meta-analyses.[91]

In this meta-analysis, different factors such as young women's age, lack of formal education, partner's substance use, partner not attending formal education and partner's alcohol use were found to be significantly associated with IPV among women during the COVID-19 pandemic.

In this review, young maternal age was found to be significantly associated with IPV. This finding was found to be consistent with the WHO report[4] and study conducted in north-west Ethiopia.[92] The risk of violent behavior may be increased by inadequate communication and consensus regarding various issues, including sexual relationships, individual preferences, and reproductive matters among young men and women.

In this meta-analysis, women who didn't attend formal education were three times more likely to experience IPV. This finding is consistent with studies conducted in the USA,[93] Nigeria,[94] Iran,[95] Tanzania[96] and Rwanda,[97] where women with no formal education were more likely to experience IPV. This finding could potentially be attributed due to the fact that women with no formal education have less access to information concerning sexual and reproductive health rights, are economically unstable, have low self-esteem, and become less likely to fight against IPV and inferior norms compared with their counterparts.[98]

In this study, participants whose partners used alcohol were more likely to experience IPV compared with those who did not use alcohol. Consistent with this finding, different previous literature also demonstrated that the husband's alcohol consumption was found to be a predictor for IPV.[99–101] Similarly, women whose partners used substances were more likely to experience IPV compared with their counterparts. This finding is also supported by the study conducted in China[79] and Nigeria.[102] This could be due to the reason that alcohol consumption beyond the WHO limit[103] and use of other substances could result in physiological disturbance which could lead to loss of self-control,[104] cheating, parental disagreement, financial burdens on the entire family,[102] and misunderstanding of communications,[105] which subsequently creates an opportunity for violence. Moreover, this might be due to the reason that the COVID-19 pandemic has changed the pattern of alcohol and substance (cannabis and tobacco) use. This in turn might increase the rate of IPV.[106]

Women whose partners didn't attend formal education were three times more likely to experience IPV. In line with this finding, the previous studies conducted in Indonesia,[107] Kenya[108] and Ethiopia[109] also found that the chance of experiencing IPV among intimate partners with no formal education is increased. This might be due to the fact that most uneducated partners are more prone to become economically unstable and misbehave with their wives, therefore, the freedom to decision-making by their wives will be compromised.[110]

Moreover, partners who didn't attend formal education were also three times more likely to practice IPV. This finding is found to be in line with the evidence from a demographic and health survey in central Africa.[111] This might be due to the fact that education has a direct relationship with economy and awareness,[112] therefore, their aggressive behaviour might be due to low contribution to household income, poor awareness towards gender-related issues and poor access to media.[113]

In this meta-analysis, women's loss of income due to COVID-19 was strongly associated with IPV. This finding was strongly supported by different studies.[114 115] This might be due to the fact that the COVID-19 pandemic causes women to experience loss of employment and income as they are often forced to engage in an informal sector with a low pay scale. Therefore, the decreased financial stability among women could lead them to experience difficulties in covering their daily expenses and also increase their dependency on their partners which could finally contribute to the practice of IPV.

This systematic review and meta-analysis study provides a clear image of IPV among women of reproductive age during the COVID-19 pandemic. However, it has its' own limitations. First, this review was limited to only articles published in the English language. However, articles published in other languages are uncommon in Ethiopia. Second, the health facility based data may not be representative of the general population. However, more than two-thirds of studies are community based research, thus, this finding is more likely to be representative of the general population. Third, more than two-thirds of the included studies were cross-sectional studies, therefore, this couldn't show the cause-effect relationship between variables and may not indicate the longitudinal effect of the COVID-19 pandemic on IPV. Fourth, since the selected studies addressed sensitive issues like sexual violence, the response bias might be considered as a potential bias. Lastly, since the included studies didn't address issues related to the comparison of IPV prevalence before and during COVID-19, currently, it becomes difficult to draw a firm conclusion on an increase in IPV.

CONCLUSION

In this study it was found that a third of women of reproductive age experienced IPV during the COVID-19 pandemic. Psychological violence was the most common form of IPV. In this meta-analysis, different factors such as young women's age, lack of formal education, partner's substance use, partner not attending formal education and partner's alcohol use were found to be significantly associated with IPV among women during the COVID-19 pandemic. Therefore, this finding gives an

insight for policymakers to focus on empowering women and their partner's economic and educational status, promoting health education for partners towards the negative impact of bad behaviours like alcohol and other substance utilisation on their health and the physical, mental, and social well-being of women.

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REFERENCES

1 Hossain M. Gender based violence research methodologies in humanitarian settings: an evidence review and recommendations. 2017.
2 UN. Declaration on the elimination of violence against women. 1993. Available: https://www.un.org/en/genocideprevention/documents/atrocity-crimes/Doc.21_declaration%20elimination%20vaw.pdf
3 WHO. *Violence against Women*.2021. Available: https://www.who.int/news-room/fact-sheets/detail/violence-against-women
4 Organization W.H. Violence against women prevalence estimates, 2018: global, regional and national prevalence estimates for intimate partner violence against women and global and regional prevalence estimates for non-partner sexual violence against women. World Health Organization; 2021.
5 UN. Universal declaration of human rights. 1948 Available: https://www.un.org/en/about-us/universal-declaration-of-human-rights
6 Devries KM, Mak JYT, García-Moreno C, *et al*. Global health. The global prevalence of intimate partner violence against women. *Science* 2013;340:1527–8.
7 Sardinha L, Maheu-Giroux M, Stöckl H, *et al*. Global, regional, and national prevalence estimates of physical or sexual, or both, intimate partner violence against women in 2018. *The Lancet* 2022;399:803–13.
8 Markman HJ, Renick MJ, Floyd FJ, *et al*. Preventing marital distress through communication and conflict management training: a 4- and 5-year follow-up. *J Consult Clin Psychol* 1993;61:70:70–7:.
9 Niolon PH, *et al*. Intimate partner violence prevention: resource for action: a compilation of the best available evidence. 2023.
10 Organization WH. *Understanding and Addressing Violence against Women: Intimate Partner Violence*. World Health Organization, 2012.
11 Abbas J, Aqeel M, Ling J, *et al*. Exploring the relationship between intimate partner abuses, resilience, psychological, and physical health problems in Pakistani married couples: a perspective from the collectivistic culture. *Sex Relation Ther* 2023;38:431–60.
12 Collymore Y. *Conveying Concerns: Women Report on Gender-Based Violence*. Population Reference Bureau, 2000.
13 Breiding MJ, Black MC, Ryan GW. Chronic Disease and Health Risk Behaviors Associated with Intimate Partner Violence—18 U.S. States/Territories, 2005. *Ann Epidemiol* 2008;18:538–44.
14 Bonomi AE. Medical and Psychosocial Diagnoses in Women With a History of Intimate Partner Violence. *Arch Intern Med* 2009;169:1692.
15 Cesario SK, McFarlane J, Nava A, *et al*. Linking Cancer and Intimate Partner Violence. *Clin J Oncol Nurs* 2014;18:65–73.
16 Coker AL, Hopenhayn C, DeSimone CP, *et al*. Violence against Women Raises Risk of Cervical Cancer. *J Womens Health (Larchmt)* 2009;18:1179–85.
17 Sigalla GN, Rasch V, Gammeltoft T, *et al*. Social support and intimate partner violence during pregnancy among women attending antenatal care in Moshi Municipality, Northern Tanzania. *BMC Public Health* 2017;17::240.
18 Alhusen JL, Ray E, Sharps P, *et al*. Intimate partner violence during pregnancy: maternal and neonatal outcomes. *J Womens Health (Larchmt)* 2015;24:100–6.
19 Hill A, Pallitto C, McCleary-Sills J, *et al*. A systematic review and meta-analysis of intimate partner violence during pregnancy and selected birth outcomes. *Intl J Gynecology & Obste* 2016;133:269–76.
20 Woollett N, Hatcher AM. Mental health, intimate partner violence and HIV. *S Afr Med J* 2016;106:969.
21 Goo L, Harlow SD. Intimate partner violence affects skilled attendance at most recent delivery among women in Kenya. *Matern Child Health J* 2012;16:1131–7.
22 Campbell AM. An increasing risk of family violence during the Covid-19 pandemic: Strengthening community collaborations to save lives. *Forensic Sci Int Rep* 2020;2:100089.
23 Holingue C, Kalb LG, Riehm KE, *et al*. Mental Distress in the United States at the Beginning of the COVID-19 Pandemic. *Am J Public Health* 2020;110:1628–34.
24 Evans ML, Lindauer M, Farrell ME. A Pandemic within a Pandemic - Intimate Partner Violence during Covid-19. *N Engl J Med* 2020;383:2302–4.
25 Usher K, Bhullar N, Durkin J, *et al*. Family violence and COVID-19: Increased vulnerability and reduced options for support. *Int J Mental Health Nurs* 2020;29:549:549–52:.
26 FMOH. *Infection Prevention and Control Interim Protocol for COVID-19 in Health Care Settings in Ethiopia*. Ethiopia: FMOH Addis Ababa, 2020.
27 Jones N, Sanchez Tapia I, Baird S, *et al*. Intersecting barriers to adolescents' educational access during COVID-19: Exploring the role of gender, disability and poverty. *Int J Educ Dev* 2021;85:102428.
28 Woldehanna T, *et al*. Listening to young lives at work in ethiopia: third call. 2021.
29 Jones N, *et al*. Child marriage risks in the context of covid-19 in ethiopia. In: *Gender and Adolescence: Global Evidence*. London, UK, 2020.
30 Harris D, *et al*. The impact of covid-19 in ethiopia: policy brief. Google Scholar; 2021.
31 Denano T. COVID-19's Effects on Macroeconomic Indicators in Ethiopia: Systematic Review of Articles. *Clinicoecon Outcomes Res* 2023;15:573–8.

32 Wana H, Ababulgu N, Kudama G, *et al*. Evil Challenges and the Economy of Ethiopia at the Era of COVID-19. *J Health Manag* 2024;26:50–8.
33 McCann J, Sinno L, Ramadhan E, *et al*. COVID-19 Disruptions of Food Systems and Nutrition Services in Ethiopia: Evidence of the Impacts and Policy Responses. *Ann Glob Health* 2023;89:30.
34 Zemenu YK, Menale AW. Physical violence and associated factors during pregnancy in yirgalem town, south ethiopia. 2016.
35 Laelago T, Belachew T, Tamrat M. Prevalence and Associated Factors of Intimate Partner Violence during Pregnancy among Recently Delivered Women in Public Health Facilities of Hossana Town, Hadiya Zone, Southern Ethiopia. *OAlib* 2014;01:1–9.
36 Bifftu BB, Dachew BA, Tadesse Tiruneh B, *et al*. Domestic Violence among Pregnant Mothers in Northwest Ethiopia: Prevalence and Associated Factors. *Adv Public Health* 2017;2017:1–6.
37 Belay AS, Kassie Gidafie A, Abera Gudeta T. Perinatal intimate partner violence during COVID-19 and its associated factors among postpartum mothers attending newborn immunization in southern Ethiopia, 2021: A cross-sectional study. *SAGE Open Med* 2022;10.
38 Tadesse AW, Tarekegn SM, Wagaw GB, *et al*. Prevalence and Associated Factors of Intimate Partner Violence Among Married Women During COVID-19 Pandemic Restrictions: A Community-Based Study. *J Interpers Violence* 2022;37:8632–50.
39 Fetene G, Alie MS, Girma D, *et al*. Prevalence and its predictors of intimate partner violence against pregnant women amid COVID-19 pandemic in Southwest Ethiopia, 2021: A cross-sectional study. *SAGE Open Med* 2022;10.
40 Demeke MG, Shibeshi ET. Intimate partner violence against women of reproductive age and associated factors during COVID-19 pandemic in Northern Ethiopia, 2021: A community-based cross-sectional study. *Front Glob Womens Health* 2023;3:977153.
41 Shewangzaw Engda A, Dargie Wubetu A, Kasahun Amogne F, *et al*. Intimate partner violence and COVID-19 among reproductive age women: A community-based cross-sectional survey, Ethiopia. *Womens Health (Lond)* 2022;18.
42 Teshome A, Gudu W, Bekele D, *et al*. Intimate partner violence among prenatal care attendees amidst the COVID-19 crisis: The incidence in Ethiopia. *Intl J Gynecology & Obste* 2021;153:45–50.
43 Kassie A, Handebo S, Adugna A, *et al*. Violence against girls during COVID-19 pandemic and associated factors in Gondar city, North West Ethiopia. *Epidemiol Infect* 2022;150:e31.
44 Gebrewahd GT, Gebremeskel GG, Tadesse DB. Intimate partner violence against reproductive age women during COVID-19 pandemic in northern Ethiopia 2020: a community-based cross-sectional study. *Reprod Health* 2020;17:152:152:.
45 Asratie MH. Domestic violence during COVID-19 pandemic among pregnant women registered for antenatal care and selected adverse pregnancy outcomes in Amhara region Ethiopia: Prospective cohort study design. *Clin Epidemiol Glob Health* 2022;17:101146.
46 Wood SN, Yirgu R, Wondimagegnehu A, *et al*. Impact of the COVID-19 pandemic on intimate partner violence during pregnancy: evidence from a multimethods study of recently pregnant women in Ethiopia. *BMJ Open* 2022;12:e055790.
47 Shitu S, Yeshaneh A, Abebe H. Intimate partner violence and associated factors among reproductive age women during COVID-19 pandemic in Southern Ethiopia, 2020. *Reprod Health* 2021;18:246:246:.
48 Mingude AB, Dejene TM. Prevalence and associated factors of gender based violence among Baso high school female students, 2020. *Reprod Health* 2021;18:247:247:.
49 UN. Gender equality and women's empowerment. 2017. Available: https://www.un.org/sustainabledevelopment/gender-equality
50 Muluneh MD, Stulz V, Francis L, *et al*. Gender Based Violence against Women in Sub-Saharan Africa: A Systematic Review and Meta-Analysis of Cross-Sectional Studies. *IJERPH* 2020;17:903.
51 Bifftu BB, Guracho YD. Determinants of Intimate Partner Violence against Pregnant Women in Ethiopia: A Systematic Review and Meta-Analysis. *Biomed Res Int* 2022;2022:4641343.
52 WHO. Improving response as ethiopia marks two years since first covid-19 case. 2022. Available: https://www.afro.who.int/countries/ethiopia/news/improving-response-ethiopia-marks-two-years-first-covid-19-case
53 PRISMA. PRISMA flow diagram. 2020. Available: http://prisma-statement.org/prismastatement/flowdiagram.aspx
54 UN. What is domestic abuse. 2022. Available: https://www.un.org/en/coronavirus/what-is-domestic-abuse
55 Moorer O. Intimate partner violence vs. domestic violence. 2021. Available: https://ywcaspokane.org/what-is-intimate-partner-domestic-violence/#:~:text=Domestic%20Violence%20(DV)%20can%20occur,Partner%20Domestic%20Violence%20(IPDV)
56 Organization WH. WHO multi-country study on women's health and domestic violence against women: initial results on prevalence, health outcomes and women's responses. World Health Organization; 2005.
57 Institute JB. The joanna briggs institute reviewers' manual 2020: methodology for jbi scoping reviews. Adelaide:JBI; 2020.
58 JBI. Critical appraisal tools. 2020. Available: https://jbi.global/critical-appraisal-tools
59 Hair JF, *et al*. *Partial Least Squares Structural Equation Modeling (PLS-SEM) Using R: A Workbook*. Springer Nature, 2021.
60 Barendregt JJ, Doi SA, Lee YY, *et al*. Meta-analysis of prevalence. *J Epidemiol Community Health* 2013;67:974–8.
61 Higgins JPT, Thompson SG, Deeks JJ, *et al*. Measuring inconsistency in meta-analyses. *BMJ* 2003;327:557–60.
62 Tanriver-Ayder E, Faes C, van de Casteele T, *et al*. Comparison of commonly used methods in random effects meta-analysis: application to preclinical data in drug discovery research. *BMJ Open Sci* 2021;5:e100074.
63 Lau J, Ioannidis JPA, Terrin N, *et al*. The case of the misleading funnel plot. *BMJ* 2006;333:597–600.
64 Egger M, Davey Smith G, Schneider M, *et al*. Bias in meta-analysis detected by a simple, graphical test. *BMJ* 1997;315:629–34.
65 Myung S-K. How to review and assess a systematic review and meta-analysis article: a methodological study (secondary publication). *J Educ Eval Health Prof* 2023;20:25:24:.
66 Ansah EW, Asamoah A, Bimpeh B, *et al*. Covid-induced intimate partner violence: scoping review from Africa between 2020 and 2022. *Humanit Soc Sci Commun* 2023;10:1–10.
67 Alebel A, Kibret GD, Wagnew F, *et al*. Intimate partner violence and associated factors among pregnant women in Ethiopia: a systematic review and meta-analysis. *Reprod Health* 2018;15:196:196:.
68 Cheng LJ, Cheng JY, Yen KY, *et al*. Global Prevalence and Factors Related to Intimate Partner Violence Amongst People Living with Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome: A Systematic Review, Meta-Analysis, and Meta-Regression. *Trauma, Violence, & Abuse* 2023;24:2466–85.
69 White SJ, Sin J, Sweeney A, *et al*. Global Prevalence and Mental Health Outcomes of Intimate Partner Violence Among Women: A Systematic Review and Meta-Analysis. *Trauma, Violence, & Abuse* 2024;25:494–511.
70 Closson K, Lee M, Gibbs A, *et al*. When Home is Not a Safe Place: Impacts of Social Distancing Directives on Women Living with HIV. *AIDS Behav* 2020;24:3017–9.
71 Maheu-Giroux M, Sardinha L, Stöckl H, *et al*. A framework to model global, regional, and national estimates of intimate partner violence. *BMC Med Res Methodol* 2022;22:159.
72 García-Moreno C, *et al*. *Global and Regional Estimates of Violence against Women: Prevalence and Health Effects of Intimate Partner Violence and Non-Partner Sexual Violence*. 2013: World Health Organization,
73 Meskele M, Khuzwayo N, Taylor M. Intimate partner violence against women living with and without HIV, and the associated factors in Wolaita Zone, Southern Ethiopia: A comparative cross-sectional study. *PLoS One* 2019;14:e0220919.
74 Andarge E, Shiferaw Y. Disparities in Intimate Partner Violence among Currently Married Women from Food Secure and Insecure Urban Households in South Ethiopia: A Community Based Comparative Cross-Sectional Study. *Biomed Res Int* 2018;2018:4738527.
75 Muuo S, Muthuri SK, Mutua MK, *et al*. Barriers and facilitators to care-seeking among survivors of gender-based violence in the Dadaab refugee complex. *Sex Reprod Health Matters* 2020;28:1722404.
76 Gubi D, Nansubuga E, Wandera SO. Correlates of intimate partner violence among married women in Uganda: a cross-sectional survey. *BMC Public Health* 2020;20::1008.
77 Lugova H, Samad N, Haque M. Sexual and Gender-Based Violence Among Refugees and Internally Displaced Persons in the Democratic Republic of the Congo: Post-Conflict Scenario
78 Niazi M, *et al*. The prevalence of domestic violence among pregnant women in iran: A systematic review and meta-analysis. *Sadra Med J* 2015;3:139–50.
79 Wang T, Liu Y, Li Z, *et al*. Prevalence of intimate partner violence (IPV) during pregnancy in China: A systematic review and meta-analysis. *PLoS ONE* 2017;12:e0175108.
80 Shamu S, Abrahams N, Temmerman M, *et al*. A Systematic Review of African Studies on Intimate Partner Violence against Pregnant Women: Prevalence and Risk Factors. *PLoS ONE* 2011;6:e17591.
81 Adisalem ST, Asegie AM. Effects of covid-19 on the livelihoods of rural women in Ethiopia. *CABI Agric Biosci* 2023;4:1–11.

82 Sow N. How to address the sexual violence epidemic in Ethiopia, 2021. Available: https://www.aljazeera.com/opinions/2021/11/12/how-to-address-the-sexual-violence-epidemic-in-ethiopia
83 Kalra G, Bhugra D. Sexual violence against women: Understanding cross-cultural intersections. *Indian J Psychiatry* 2013;55:244:244–9:.
84 Heron RL, Eisma MC. Barriers and facilitators of disclosing domestic violence to the healthcare service: A systematic review of qualitative research. *Health Soc Care Community* 2021;29:612–30.
85 Evans MA, Feder GS. Help-seeking amongst women survivors of domestic violence: a qualitative study of pathways towards formal and informal support. *Health Expect* 2016;19:62–73.
86 Alebel A, Kibret GD, Wagnew F, *et al*. Intimate partner violence and associated factors among pregnant women in Ethiopia: a systematic review and meta-analysis. *Reprod Health* 2018;15:1–12.
87 Njuki R, Okal J, Warren CE, *et al*. Exploring the effectiveness of the output-based aid voucher program to increase uptake of gender-based violence recovery services in Kenya: A qualitative evaluation. *BMC Public Health* 2012;12:1–8.
88 García-Moreno C, *et al*. *WHO Multi-Country Study on Women's Health and Domestic Violence against Women*. Geneva: World health organization, 2005:204. 18.
89 Casey SE, *et al*. Care-seeking behavior by survivors of sexual assault in the Democratic Republic of the Congo. *Am J Public Health* 2011;101:1054–5.
90 Hynes M, *et al*. A determination of the prevalence of gender-based violence among conflict-affected populations in East Timor. *Disasters* 2004;28:294–321.
91 James L, Brody D, Hamilton Z. Risk factors for domestic violence during pregnancy: a meta-analytic review. *Violence Vict* 2013;28:359–80.
92 Semahegn A, Belachew T, Abdulahi M. Domestic violence and its predictors among married women in reproductive age in Fagitalekoma Woreda, Awi zone, Amhara regional state, North Western Ethiopia. *Reprod Health* 2013;10:1–9.
93 Bohn DK, Tebben JG, Campbell JC. Influences of Income, Education, Age, and Ethnicity on Physical Abuse Before and During Pregnancy. *Journal of Obstetric, Gynecologic & Neonatal Nursing* 2004;33:561–71.
94 Iliyasu Z, Abubakar IS, Galadanci HS, *et al*. Prevalence and risk factors for domestic violence among pregnant women in northern Nigeria. *J Interpers Violence* 2013;28:868–83.
95 Abdollahi F, Abhari F, Delavar M, *et al*. Physical violence against pregnant women by an intimate partner, and adverse pregnancy outcomes in Mazandaran Province, Iran. *J Fam Community Med* 2015;22:13.
96 Mahenge B, Likindikoki S, Stöckl H, *et al*. Intimate partner violence during pregnancy and associated mental health symptoms among pregnant women in Tanzania: a cross-sectional study. *BJOG* 2013;120:940–6.
97 Ntaganira J, Muula AS, Siziya S, *et al*. Factors associated with intimate partner violence among pregnant rural women in Rwanda. *Rural Remote Health* 2009;9:1153:1–7:.
98 Ngao Loembe D. Association between women's level of education and their experience of intimate partner violence in nigeria: a cross-sectional study. 2020.
99 Abramsky T, Watts CH, Garcia-Moreno C, *et al*. What factors are associated with recent intimate partner violence? findings from the WHO multi-country study on women's health and domestic violence. *BMC Public Health* 2011;11:109:1–17:.
100 Devries KM, Kishor S, Johnson H, *et al*. Intimate partner violence during pregnancy: analysis of prevalence data from 19 countries. *Reprod Health Matters* 2010;18:158–70.
101 JaneSUnderstanding Gender-based Violence: Evidence from Kilimanjaro Assessment of Rombo and Moshi Rural. *ASR* 2010;14:84–101.
102 Fawole AO, Hunyinbo KI, Fawole OI. Prevalence of violence against pregnant women in Abeokuta, Nigeria. *Aust N Z J Obstet Gynaecol* 2008;48:405–14.
103 Organization WH. *Preventing Intimate Partner and Sexual Violence against Women: Taking Action and Generating Evidence*. World Health Organization, 2010.
104 Woolf-King SE, Maisto SA. Alcohol use and high-risk sexual behavior in Sub-Saharan Africa: a narrative review. *Arch Sex Behav* 2011;40:17–42.
105 Stöckl H, March L, Pallitto C, *et al*. Intimate partner violence among adolescents and young women: prevalence and associated factors in nine countries: a cross-sectional study. *BMC Public Health* 2014;14::751.
106 Health C.o.e.f.W. Info sheet 2: action on intimate partner violence and substance use in the covid-19 context. 2021. Available: https://cewh.ca/wpcontent/uploads/2021/04/CEWH_CovidInfo_Action.pdf
107 Putra IGNE, Pradnyani PE, Parwangsa NWPL. Vulnerability to domestic physical violence among married women in Indonesia. *JHR* 2019;33:90–105.
108 Makayoto LA, Omolo J, Kamweya AM, *et al*. Prevalence and associated factors of intimate partner violence among pregnant women attending Kisumu District Hospital, Kenya. *Matern Child Health J* 2013;17:441–7.
109 Gebrezgi BH, *et al*. Factors associated with intimate partner physical violence among women attending antenatal care in Shire Endaselassie town. *Reprod Health* 2015;14:1–10.
110 Halliday Hardie J, Lucas A. Economic Factors and Relationship Quality Among Young Couples: Comparing Cohabitation and Marriage. *J of Marriage and Family* 2010;72:1141–54.
111 Tsala Dimbuene Z, Ahinkorah BO, Amugsi DA. Men's education and intimate partner violence-Beyond the victim-oriented perspective: Evidence from demographic and health surveys in Central Africa. *PLoS One* 2024;19:e0302627.
112 Patrinos HA. *Why Education Matters for Economic Development*. 17. World Bank Blogs, 2016.
113 Parish WL, Wang T, Laumann EO, *et al*. Intimate partner violence in China: national prevalence, risk factors and associated health problems. *Int Fam Plan Perspect* 2004;30:174–81.
114 Mojahed A, Alaidarous N, Kopp M, *et al*. Prevalence of Intimate Partner Violence Among Intimate Partners During the Perinatal Period: A Narrative Literature Review. *Front Psychiatry* 2021;12:601236.
115 Hahn CK, Gilmore AK, Aguayo RO, *et al*. Perinatal Intimate Partner Violence. *Obstet Gynecol Clin North Am* 2018;45:535–47.